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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,390	05/18/2005	Nigel Paul Schofield	M02B151	4420
71134 7590 07/08/2010 Edwards Vacuum, Inc. 2041 MISSION COLLEGE BOULEVARD SUITE 260 SANTA CLARA, CA 95054				
EXAMINER FAYYAZ, NASHIMIYA SAQIB				
ART UNIT 2856		PAPER NUMBER		
NOTIFICATION DATE 07/08/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LORETTA.SANDOVAL@EDWARDSVACUUM.COM

### Office Action Summary

**Application No.**

10/535,390

**Applicant(s)**

SCHOFIELD ET AL.

**Examiner**

NASHMIYA FAYYAZ

**Art Unit**

2856

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1.5-28, 32-34 and 36-39 is/are pending in the application.
- 4a) Of the above claim(s) 7-14, 18-23, 32-34 and 36-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1.5, 15-17 and 24-28 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 5, 15-17, and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP-828332 (Konishi). As to claim 1, Konishi discloses a vacuum pump status evaluation system for monitoring the condition of a pump including prediction of pump life based on the rotor tightness (amount of clearance between the rotor and stator) where the current supplied to the motor is measured which can then be used to estimate the future current, see pages 2 et seq. Further, it is noted that Konishi et al do not specifically indicate generating an "abnormal" pump speed, per se. However, it is indicated that friction mapping is possible in which tightness can be determined as a function of the current as set forth in figs. 8 and 9. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have realized that in creating the map of friction, abnormal speeds would be applied to the pump to create a range so as to create the "map" of frictions since the current to torque data is a function of the rotational speed and the motor tends to change the rotation speed in accordance with the load of friction, see page 5, lines 41 et seq. As to claim 5, it is indicated that the motor tends to change the rotation speed with the load of friction

i.e. reduced clearance. As to claim 15, note computer 6 is capable of storing signals. As to claim 16, usage of a LAN or internet is old and well-known for transmitting signals and therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have included a LAN or internet as a matter of design choice for remote storage of signals. As to claim 17, the system of Konishi is designed to monitor the condition of the pump. As to claims 24 and 25, provision of an audible or visual indication or "alarm" is old and well-known in the art of condition monitoring. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have included and audible or visual alarm as an indication of an abnormal condition so that the operator is aware of a problem. As to claim 26, note page 2, lines 1-5 indicating "removal" of the pump if necessary after monitoring. As to claim 27, it would appear that if the pump is not on then there would be no testing such that the monitoring system would be able to determine whether the pump is on and is in a condition which permits testing. As to claim 28, there is an indication that there is a trend of torque data in time progression, see page 3 last 3 lines.

***Allowable Subject Matter***

2. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 5, 15-17 and 24-28 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NASHMIYA FAYYAZ whose telephone number is (571)272-2192. The examiner can normally be reached on Tuesdays and Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hezron Williams/  
Supervisory Patent Examiner, Art  
Unit 2856

/N. F./

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